

Application No.: 09/828,225

Docket No.: 20386-00295-US

REMARKS

Claims 4, 5, 7-14 and 17-26 are pending. Claims 1-3, 6 and 15-16 are canceled. Claims 4, 5, 7-14 and 17-23 are amended. Claims 24-26 are new.

Claim Amendments

New claim 24 is independent and includes the subject matter of canceled claims 1-3. New claims 25 and 26 depend from claim 24 and are supported by specification page 8 at lines 34-36. Claims 4, 5, 7-14 and 17-23 are amended to improve readability, correct errors and to depend from new claim 24. No new matter has been added.

Objection to the Abstract

Applicants respectfully request reconsideration and withdrawal of the objection to the abstract. The replacement abstract included herewith is written to improve readability and does not include objectionable legal phraseology.

Claim Objections

Applicants respectfully request reconsideration and withdrawal of the objections to claims 2, 3, 5-8, 15, 17 and 22. Claims 2, 3, 6 and 15 are canceled. Claims 5, 7-8, 17 and 22 are amended to overcome the cited objections.

Claim Rejections - 35 U.S.C. §112

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-23 under 35 U.S.C. §112, second paragraph. Claims 1-3, 6 and 15-16 are canceled. New claim 24 is written to overcome the rejected language cited in previous claims 1-3. Claims 4, 5, 7-14 and 17-23 are written to overcome the cited rejections.

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Claim Rejections - 35 U.S.C. §102

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-23 under 35 U.S.C. §102(b) as being anticipated by Dietz (US 5,299,532).

Claims 1-3, 6 and 15-16 are canceled.

New claim 24 recites "at least one inlet chamber for directing the solid material to the process chamber inlet, wherein the at least one inlet chamber is disposed prior to the process chamber in the direction of the flow of the solid material, *wherein the at least one inlet chamber extends in a vertical direction and ends in an open top inside the furnace*, wherein the open top is arranged to receive the flow of solid material" (emphasis added). Thus, the claimed system includes an inlet chamber for directing the solid material to the process chamber inlet, wherein the inlet chamber ends in an open top inside the furnace. In Dietz, conduits 58a and 58b return material from corresponding separators 40a and 40b. Dietz does not include a separate open-topped inlet chamber inside the furnace for directing the solid material to the inlet of the process chamber. Conduits 58a and 58b open into the rear walls of inlet chambers 94a and 94b, respectively (Figs. 2 and 4). The chambers 94a and 94b communicate with chambers 92a, 96a, 92b and 96b through openings 112a, 114a, 112b and 114b (Fig. 4), which are all closed at the top (partition portions 24a'' and 24b''), rather than open, as recited in claim 24. Partition portions 24a'' and 24b'' also close the inlet chambers 94a and 94b. Thus, contrary to the teaching of Dietz, the claimed system allows for flow of solid material to the inlet at the top of the inlet chamber (i.e., from inside the fluidized bed reactor along with the internal circulation IC).

For the above reasons, claim 24 is not anticipated by Dietz. Since claims 4-5, 7-14, 17-23, 25 and 26 depend from claim 24, these claims are also allowable.

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-8, 15-17, 20 and 21 under 35 U.S.C. §102(b) as being anticipated by Hyppanen (WO 97/46829).

Claims 1-3, 6 and 15-16 are canceled.

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In Hyppanen, the only element that can be considered an inlet chamber is chamber 216 (Fig. 2). Chamber 216 is not located inside the furnace and is not open-topped, as recited in claim 24. In Hyppanen, the material enters through a reactor chamber (furnace) outlet 226 into the chamber 216. Thus, it is clear that the outlet 226 directs material outside of the furnace 212. As shown in Figs. 1 and 2 of Hyppanen, chambers 18 and 218 are also outside the furnace 212. Furthermore, the inlet to the inlet chamber 216 is not located at its top, but is formed by the inclined outlet 226 of the furnace.

For the above reasons, claim 24 is not anticipated by Hyppanen. Since claims 4-5, 7-8, 17, 20 and 21 depend from claim 24, these claims are also allowable.

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-8, 10, 11, 15-17, 20 and 21 under 35 U.S.C. §102(b) as being anticipated by Gorzegno (US 5,218,931).

Claims 1-3, 6 and 15-16 are canceled.

Gorzegno fails to show an inlet chamber inside the furnace as recited in new claim 24. The inlet compartment 88 is located at the lower part of a trough 76 that returns material from the vortex separator 56 and is separated from the furnace by partitions 20 and 22. Thus, the trough 76 is a return duct, not a furnace. A similar trough 78 defined by partitions 24 and 26 is spaced from the trough 76. Spaces referred to as "first furnace section 28" and "second furnace section 30" are formed outside the troughs. Heat exchange section 80 is also not inside the furnace as recited in claim 24, because the heat exchange section is totally isolated from the furnace sections 28 and 30 by the troughs 76 and 78.

For the above reasons, claim 24 is not anticipated by Gorzegno. Since claims 4-5, 7-8, 10, 11, 17, 20 and 21 depend from claim 24, these claims are also allowable.

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Conclusion

In view of the above amendment, applicants believe the pending application is in condition for allowance.

If a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 20386-00295-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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